AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

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1. (currently amended): A method of restoring phase information on radiation transmitted through an object on the basis of detection data obtained by detecting intensity of the radiation transmitted through the object, said method comprising the steps of:

(a) correcting blur amount by filter processing using a function of spatial frequencies for at least one of first detection data and second detection data obtained by detecting intensity of radiation on plural detection planes at different distances from the object, said first and second detection data representing radiation image information on the plural detection planes, respectively;

(b) obtaining differential data representing **a** difference between ~~a~~ said first detection data and said second detection data in which the blur amount has been corrected for at least one thereof;

(c) obtaining Laplacian of phase on the basis of said differential data and any one of said first and second detection data before correcting the blur amount and the detection data in which the blur amount has been corrected; and

(d) obtaining phase data of the radiation by performing inverse Laplacian computation on the Laplacian of phase.

2. (previously presented): A method according to claim 1, wherein step (a) includes uniforming blur amounts caused by a respective focal size of a radiation source for each of said

first and second detection data on the basis of respective blur functions of said first and second detection data.

3. (currently amended): An apparatus for restoring phase information on radiation transmitted through an object on the basis of detection data obtained by detecting intensity of the radiation transmitted through the object, said apparatus comprising:

blur correcting means for correcting blur amount by filter processing using a function of spatial frequencies for at least one of first detection data and second detection data obtained by detecting intensity of radiation on plural detection planes at different distances from the object, said first and second detection data representing radiation image information on the plural detection planes, respectively;

difference processing means for obtaining differential data representing **a** difference between said first detection data and said second detection data in which the blur amount has been corrected for at least one thereof;

Laplacian processing means for obtaining Laplacian of phase on the basis of said differential data and any one of said first and second detection data before correcting the blur amount and the detection data in which the blur amount has been corrected; and

inverse Laplacian processing means for obtaining phase data of the radiation by performing inverse Laplacian computation on the Laplacian of phase.

4. (currently amended): An apparatus according to claim 3, wherein said blur correcting means uniforms blur amounts caused by a respective focal size of a radiation source for each of said first and second detection data on the basis of respective blur functions of said ~~plural sets of~~ first and second detection data.

5. (currently amended): A computer readable medium storing a computer readable program for restoring phase information on radiation transmitted through an object on the basis of detection data obtained by detecting intensity of the radiation transmitted through the object, said program actuating a CPU to execute the procedure of:

(a) correcting blur amount by filter processing using a function of spatial frequencies for at least one of first detection data and second detection data obtained by detecting intensity of radiation on plural detection planes at different distances from the object, first and second

detection data representing radiation image information on the plural detection planes, respectively;

(b) obtaining differential data representing **a** difference between said first detection data and said second detection data in which the blur amount has been corrected for at least one thereof;

(c) obtaining Laplacian of phase on the basis of said differential data and any one of said first and second detection data before correcting the blur amount and the detection data in which the blur amount has been corrected; and

(d) obtaining phase data of the radiation by performing inverse Laplacian computation on the Laplacian of phase.

6. (previously presented): A computer readable medium according to claim 5, wherein procedure (a) includes uniforming blur amounts caused by a respective focal size of a radiation source for each of said first and second detection data on the basis of respective blur functions of said first and second detection data.